

NOTEWORTHY GRASSES FROM MEXICO III¹

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For previous papers see *Phytologia* 27(6):441-444, Jan., 1974;
Phytologia 28(4):313-318, Aug., 1974.

Bothriochloa saccharoides (Sw.) Rydb. var. laguroides (DC)
comb. nov. Based on Andropogon laguroides DC. Cat. Hort. Monsp.
78. 1813. Andropogon saccharoides var. laguroides (DC) Hack. in
Mart. Fl. Bras. 2(3):293. 1883.

Although Andropogon laguroides DC. (Mexican sourgrass) was
described from Mexico it has only been treated with consistency
as a species in South America.

This grass was first included in the Argentine flora by
Hackel in *Flora Brasiliensis* (1883) as follows: "Habitat in
Brasilia australi (Sello) - in Mexico (Schiede), prope Montevideo
(Gaudichaud), in Argentine (ex Grisebach)" and was accepted by
Stuckert, 1904, in "*Gramineas Argentinas*" as Andropogon
saccharoides var. laguroides (DC) Hack.

- South American treatments of this grass as a species include:
- 1939. Parodi, L.R. *Gramineas Bonarienses*, third edition.
 - 1943. Parodi, L.R. *Veg. del Dept. de San Martin. Darwiniana*
6:127-178.
 - 1946. Parodi, L.R. *Gramineas Bonarienses*, fourth edition.
 - 1948. Roseveare, G.M. *The grasslands of Latin America. Imperial*
Bureau Bul. 36.
 - 1948. DeAraujo, A.A. *O Graminado disclimax. Rio Grande do Sul,*
Brazil.
 - 1949. Cabrera, A.L. *Las comunidades vegetales de los alrededores*
de la Plata. Lilloa 20:269-276.
 - 1950. Crovello, R. Martínez & B.G. Piccinini. *La vegetacion de*
la Republica Argentina Rev. Inves. Agric. 4(2):188.
 - 1952. Clos, E.C. *Catalogo general 1951 de la Division de*
exploraciones e introduccion de plantas. Rep. Arg.
Inst. Fito. publ. tec. 68.

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Experiment Station as Journal Article No. 706.

1957. Burkart, A. La vegetacion del Delta del Rio Parana. Darwiniana 11:457-460.
1958. Parodi, L.R. Gramineas Bonarienses, fifth edition.
1962. Hawkins, H.S. and C.M. Donald. Pasture development in the beef cattle regions of Argentina. Jour. Brit. Grassland Soc. 17:245-259.
1962. Diaz, H.B. Jornados forrajeras del noroeste Argentinian. Est. Exp. Agric. de Tucuman Publ. Misc. 12.
1969. Burkart, A. Flora Ilustrado de Entre Rios (Argentina) Parte II. Gramineas. Buenos Aires.
1972. Rosengurtt, B. et al. El caracter lipido del endosperma central en especies de Gramineas. Bol. Univ. de La Republica Uruguay 124.

Any treatment of Andropogon laguroides DC. depends first on an understanding of Andropogon saccharoides Sw. (1788) described from Jamaica and the earliest available specific epithet in the complex. In relation to typical A. saccharoides its variations have been treated as varieties (Grisebach, 1879; Hackel, 1883, 1889 and 1894; Vasey, 1894 and 1896; Eckman, 1912; Krause, 1914; Standley, 1931; Gould, 1955, 1957, and 1967) and varieties have the longest and most frequent treatment. The two previous transfers attached to Bothriochloa saccharoides have both been varieties.

However, (1) subspecies have been used (Hackel, 1889; Hitchcock, 1927) and

(2) subvarieties have been used (Hackel, 1883, 1889 and 1911; and Roberty, 1960). Hackel used subvar. in 1883 as subdivisions of varieties. Hackel used subvar. in 1889 as subdivisions of subspecies. Roberty used subvar. in 1960 as subdivisions of species.

Taxonomy in its purest sense reflects the evolutionary pattern. Taxonomy in its most practical sense reflects the status quo, that is, the present day field situation. Apparently in Andropogon it has been found difficult to do both within the same taxonomic framework.

Not all the difficulty has been concentrated at the specific and subspecific level. Andropogon has been used to include such oft-times recognized genera as Schizachyrium, Bothriochloa, Dichanthium and even the more traditional Sorghum and Sorghastrum.

Bothriochloa has usually been treated to include both Old World and New World species but Roberty suggests that its use (as Section Amphilophis under Dichanthium) be confined to one species (B. saccharoides) which is essentially New World but has two "sub-varieties" in Australia. One of these is the grass in question treated as Dichanthium saccharoides subvar. laguroides (DC) Roberty, distributed from Oklahoma to Uruguay.

Since the plants associated with A. saccharoides, e.g. saccharoides, laguroides, longipaniculatus, and torreyanus, have all been, at times, recognized as distributed from s.w. United States to Uruguay, the question of separation of the types "torreyanus" and "laguroides" seems to be the key to a taxonomic treatment. Andropogon laguroides DC., after careful review of herbarium material and published reports, is here considered to be synonymous with Andropogon torreyanus Steud., and best treated, as has most consistently been done in the past, as a variety of A. saccharoides.

Since Bothriochloa has been accepted internationally this name should be transferred to that genus.
Bothriochloa saccharoides (Sw.) Rydb. var. laguroides (DC) comb nov.

- Andropogon laguroides DC. Cat. Hort. Monsp. 78. 1813.
Andropogon laguroides Lagasca, Gen. et Spec. nov. 3. 1816.
Andropogon glaucum Torr. Ann. Lyc. N.Y. L:153. 1824; not Retz., 1789; not Muhl., 1817.
Trachypogon laguroides Nees, Agrost. Bras. 349. 1829.
Andropogon jamesii Torr. in Marcy, Expl. Red. River 302. 1853.
Andropogon torreyanus Steud., Nome Bot. ed. 2. 1:93. 1840 nomen; Steud. Syn. Pl. Glum. 1:392. 1854.
Andropogon saccharoides var. laguroides (DC) Hack. in Mart. Fl. Bras. 2(3):293. 1883.
Andropogon laguriformis Griseb. Symbol. Flor. Arg. 309. 1879.
Andropogon saccharoides Sw. subsp. laguroides (DC) Hackel, in DC. Monograph. Phanerog. 6:495. 1889.
Andropogon saccharoides subsp. genuinus var. torreyanus (Steud.) Hack. in DC. Monogr. Phan. 6:495. 1889.

- Andropogon saccharoides var. glaucus (Torr.) Scribn. Mem. Torrey Bot. Club 5:28. 1894.
- Amphilophis torreyanus (Steud.) Nash in Britton, Man. 71. 1901.
- Holcus saccharoides (Sw.) Kuntze var. laguroides (DC) Hack. ex Stuck. Anal. Mus. Nac. Buenos Aires 11:48. 1904.
- Bothriochloa laguroides (DC) Herter, Rev. Sudam. Bot. 6:135 (Junio) 1940; (DC) Pilger in Engler et al., Die Naturl. Pflanzenfam., ed. 2, 14e:160, fines de 1940.
- Bothriochloa saccharoides var. torreyana (Steud.) Gould, Southw. Nat. 3:212. 1959.
- Dichanthium saccharoides (Sw.) Roberty subvar. laguroides (DC) Roberty, Boissiera 9:168. 1960.
- Dichanthium saccharoides (Sw) Roberty subvar. torreyanum (Steud.) Roberty, Boissiera 9:168. 1960.

KEY

Culms 60 to 150 cm. tall, leafy, simple; nodes always white hispid; blades 2-8 mm. wide; panicle 5-15 cm. long; spikelets 3.2-5 mm. long; awn 15 to 20 mm. long.

Bothriochloa saccharoides var. saccharoides

Culms 30 to 100 cm. tall, in dense clumps, the leaves tending to be basal; nodes short bearded or often glabrous; blades 2-6 mm. wide; panicle 4-10 cm. long, spikelets 2.8-3.5 mm. long; awn 10-16 mm. long.

Bothriochloa saccharoides var. laguroides

Both Bothriochloa saccharoides var. saccharoides and Bothriochloa saccharoides var. laguroides are widespread in Mexico but var. laguroides is more common.

MUHLENBERGIA SINUOSA Swallen, which was described in 1947 from New Mexico and reported then from Arizona, is a common annual in both southern Sonora and northern Chihuahua. Collections include Chihuahua: at Ranch Teseachic, collected by Ganboa Gonzalez y Lopez; Sonora: between El Coyote and Bavispe, juniper/oak savanna, Beetle M - 2045.

AGROSTIS BOREALIS Hartm. has been reported from Mexico on the basis of Liebman collections which had no exact locality. A. borealis has been collected in Puebla: east of Esperanza, Beetle M - 3012, in an area that Liebman might easily have visited.

BROMUS DIANDRUS Roth (B. rigidus Roth) which previously has been reported introduced in Baja California Norte has now been collected in Puebla: east of Esperanza, Dec., 1973, Beetle M - 3008.

ARISTIDA PENINSULARIS Hitchc. is endemic to the Sonoran desert area of Baja California and the adjacent mainland. Its nearest relative appears to be an undescribed species from Peru.

ARISTIDA PERUVIANA sp. nov.

Gramen annuum; culmi dense fasciculati; ligula ad seriem pilorum reducta; foliorum laminae planae demum convolutae, glaberrimae, 1 - 2 mm. latae; gluma inferior 5 - 6 mm. l., superior 10 mm. long., lemma ca. 9 mm. l., callus barbatus; aristae 15 ad 30 mm. l., seta mediana usque ad 27 mm. l., laterales parum breviores.

Type: Peru, Dept. Arequipa, Prov. Islay, south of Mollendo, sand dunes near ocean, Nov. 17, 1935. Collected by Ynes Mexia 4172 in Herb. Univ. of California (Berkeley). Other collections include Weberbauer 6867, Arequipa (cited by McBride, 1936, Field Museum of Natural History 13:183, under Aristida adscensionis L.); Hutchinson 502, Moquegua; and E. Anderson 733, Dept. Piura, 10 kil. e. of Piura.

First glume 10 mm. long, second glume 20 mm. long, awns 4 to 5 cm. long. A. peninsularis Hitchc.
 First glume 5-6 mm. long, second glume 10 mm. long, awns 1.5 to 3 cm. long. A. peruviana Beetle

ARISTIDA PERUVIANA

Annual, bush; sheaths glabrous; ligule a conspicuous row of hairs; blades flat or somewhat involute; panicles numerous; glumes unequal, 1-nerved, the first 4 mm. long, the second 10 mm. long; lemma about 9 mm. long, glabrous below, minutely scaberulous toward the summit; callus well developed, densely pubescent; awns about equal, 1.5 to 3 cm. long, a central awn sometimes 2 mm. longer than the laterals, awns flexuous and divergent and twisting at maturity.

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NOTES ON NEW AND NOTEWORTHY PLANTS. LXXVI

Harold N. Moldenke

LIPPIA HOEHNEI var. *GOYAZENSIS* Moldenke, var. nov.

Haec varietas a forma typica speciei recedit foliis ovato-ellipticis usque ad 4.5 cm. longis 3 cm. latis ad apicem argute acutis vel breviter subacuminatis.

This variety differs from the typical form of the species in its smaller and rather narrowly ovate-elliptic leaves which are only to 4.5 cm. long and 3 cm. wide, sharply acute or shortly subacuminate at the apex, with the margins finely serrulate.

The type of the variety was collected by Gert Hatschbach (no. 34642) in "campo cerrado" at Rod. Br. 060, in the municipality of Mineiros, Goiás, Brazil, on July 20, 1974, and is deposited in the H. N. Moldenke herbarium at Plainfield, New Jersey.

The collector describes the plant as erect, 1 meter tall, the flowers rose-colored.